

CLAIMS

1. Apparatus for use with a multi-homed router connectable to a plurality of destination networks through at least first and second transit networks, comprising:

5 code executed in accordance with a set of one or more configurable parameters to initiate periodic path quality measurements for each of a set of transit network/destination network links, wherein an overriding test route identifying each transit network/destination network link is configured into the router at the time of the path quality measurement and then withdrawn after the
10 measurement;

code executed following the path quality measurements for evaluating whether a first transit network/destination network link is a candidate for rerouting to a second transit network/destination network link; and

code responsive to satisfaction of a given path evaluation criteria and
15 being executed to establish a communication with the router to facilitate a re-route from the first to the second transit network/destination network link.

2. The apparatus as described in Claim 1 further including an interface for enabling setting of the one or more configurable parameters.

20

3. The apparatus as described in Claim 2 wherein the configurable parameters include a probe type.

4. The apparatus as described in Claim 3 wherein the probe type is an
25 ICMP packet.

5. The apparatus as described in Claim 2 wherein the configurable parameters include a list identifying destination network links to be evaluated.

6. The apparatus as described in Claim 2 wherein the configurable parameters include a given IP address within a given destination network.

7. The apparatus as described in Claim 1 and further including code responsive to satisfaction of the given path evaluation criteria and being executed to output a recommendation illustrating a reroute from the first to the second transit network/destination network link.

8. The apparatus as described in Claim 1 wherein the test route is configured into the router by establishing an internal BGP (iBGP) peering session over which routing update information identifying the test route is passed.

9. The apparatus as described in Claim 1 wherein the test route is configured into the router by establishing a secure connection between the apparatus and a configuration program executing in the router.

10. A method of controlling a router connectable to a plurality of destination autonomous systems through at least first and second transit autonomous systems, comprising:

- periodically conducting local traffic analysis of outgoing packets
5 transmitted to a set of IP addresses in the destination autonomous systems;
based on data collected during the local traffic analysis, selecting a best transit autonomous system for a given destination autonomous system given the then-existing connectivity conditions; and
automatically logging into the router and entering a new configuration to
10 cause the router to reevaluate all routes heard from the selected transit autonomous system according to the new configuration.

11. The method as described in Claim 10 wherein the outgoing packets are ICMP packets.

12. The method as described in Claim 10 wherein the best transit autonomous system for a given destination autonomous system is selected according to a given path evaluation algorithm.

13. A multi-homed router connectable to a plurality of destination networks through at least first and second transit networks, comprising:

code executed in accordance with a set of one or more configurable parameters to initiate periodic path quality measurements for each of a set of transit network/destination network links, wherein an overriding test route identifying each transit network/destination network link is configured into the router at the time of the path quality measurement and then withdrawn after the measurement;

code executed following the path quality measurements for evaluating whether a first transit network/destination network link is a candidate for rerouting to a second transit network/destination network link; and

code responsive to satisfaction of a given path evaluation criteria and being executed to establish a communication with the router to facilitate a re-route from the first to the second transit network/destination network link.

15